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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,259	12/29/2000	Louis A. Lippincott	42390P9946	8787

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EXAMINER

SINGH, DALIP K

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/753,259

Applicant(s)

LIPPINCOTT, LOUIS A.

Examiner

Dalip K Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

2. IN THE CLAIMS:

In claim 19, line 1, delete "19" and insert --18--.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 10, 16 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,742,788 to Priem et al.

a. Regarding claim 1, Priem et al. **discloses** a dual frame buffer system (Figure 3), comprising: a first frame buffer (first frame buffer 43); a second frame buffer (second frame buffer 44); and a controller (control circuits 40 and 41) for copying data from the first frame buffer (first frame buffer 43) to the second frame buffer (second frame buffer 44) when data is changed in the first frame

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buffer (first frame buffer 43) and data is needed for refreshing the display monitor (col. 11, lines 1-37).

b. Regarding claim 2, Priem et al. **discloses** wherein the controller (control circuits 40 and 41) further comprises copying the data simultaneously from the first frame buffer (first frame buffer 43) to the second frame buffer (second frame buffer 44) (...the control circuits cause data to be copied...read from the first frame buffer...and written to the second frame buffer...simultaneously...col. 11, lines 29-33).

c. Regarding claims 10, it is similar in scope to claim 2 above and is rejected under the same rationale.

d. Regarding claims 16 and 22, they are similar in scope to claim 10 above and are rejected under the same rationale.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,742,788 to Priem et al. (Priem1) as applied to claim 1 above, and further in view of U.S. Patent No. 5,724,608 to Tohara, and further in view of U.S. Patent No. 5,543,824 to Priem et al (Priem2).

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a. Regarding claims 3 and 11, Priem1 et al. **does not disclose** the dual frame buffer system, further comprising: a first address generator corresponding to the first frame buffer; a second address generator corresponding to the second frame buffer. Tohara **discloses** a first address generator (1st address generator 5) corresponding to the first frame buffer (1st buffer 12); a second address generator (2nd address generator 5A) corresponding to the second frame buffer (2nd buffer) (Figure 5, col. 5, lines 66-67; col. 6, lines 1-21). Priem1 and Tohara **do not disclose** a timing generator for coordinating the timing between the first and second address generators for refreshing the display monitor. Priem2 **discloses** a timing generator (video timing generator 22) for coordinating the timing between the first and second address generators for refreshing the display monitor (col. 4, lines 30-45). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify the device as taught by Priem1 with the feature "address generators" as taught by Tohara and the feature "timing generator" as taught by Priem2 because address generators provides for a simple processing system design (col. 6, lines 16-17, Tohara) and the timing generator frees up the central processing system for other tasks (col. 4, lines 15-45).

7. Claims 4-6, 12-15, 17-19, 21, 23-24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,742,788 to Priem et al. (Priem1) as applied to claim 1 above, and further in view of U.S. Patent No. 5,724,608 to Tohara, and further in view of U.S. Patent No. 5,543,824 to Priem et al (Priem2) as applied to claim 3 above, and further in view of U.S. Patent No. 5,757,364 to Ozawa et al.

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- a. Regarding claims 4 and 12, Priem1-Tohara-Priem2 combination **does not disclose** a detector for detecting when an update is made to the data in the first frame buffer; and a decoder for decoding the location of the updated data, wherein the controller transmits the updated data from the first frame buffer to the second frame buffer when the display is refreshed. Ozawa et al. **discloses** a detector (window type table 132, comparator 118) for detecting when an update is made to the data in the first frame buffer; and a decoder (selector 121) for decoding the location of the updated data (col. 4, lines 36-48; col. 5, lines 1-67; col. 6, lines 1-41). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Priem1-..Priem2 combination with the feature “detector and decoding and transmitting only the updated data” as taught by Ozawa et al. **because** it provides for efficiently rendering frames by transmitting only the updated data and provides for efficient real time displaying dynamic images (col. 1, lines 40-67).
- b. Regarding claims 5 and 13, Priem2 et al. **discloses** wherein the first frame buffer comprises a plurality of regions (contiguous memory 42...is constructed of VRAM...col. 7, lines 47-67; col. 8, lines 1-7).
- c. Regarding claims 6 and 14, they are similar in scope to claim 4 above and are rejected under the same rationale.
- d. Regarding claims 15, 17, 21 and 23, they are similar in scope to claim 12 above and are rejected under the same rationale.
- e. Regarding claims 18 and 24, they are similar in scope to claim 13 above and are rejected under the same rationale.

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- f. Regarding claims 19 and 25, they are similar in scope to claim 14 above and are rejected under the same rationale.
8. Claims 7-9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,742,788 to Priem et al. (Priem1) as applied to claim 1 above, and further in view of U.S. Patent No. 5,790,138 to Hsu.
- a. Regarding claims 7 and 9, Priem1 **does not disclose** wherein the first frame buffer is part of a unified memory architecture. Hsu **discloses** a computer unified memory architecture system wherein the first frame buffer (frame buffer memory 304b) is part of a unified memory architecture (col. 3, lines 65-67; col. 4, lines 1-9). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Priem1 with the feature "frame buffer as part of a unified memory architecture" because it provides for a lower system cost (col. 1, lines 62-65).
- b. Regarding claim 8, Hsu **discloses** wherein the second frame buffer (expansion frame buffer memory 306) stores data used to refresh the display monitor (col. 3, lines 65-67; col. 4, lines 1-9).
- c. Regarding claim 20, it is similar in scope to claim 9 above and is rejected under the same rationale.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(703) 305-3895**. The examiner can normally be reached on Mon-Thu (8:00AM-6:30PM) Fridays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(703) 308-6829**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

dks

April 6, 2003



MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600